

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1                   Claim 1 (original): A refurbisher for treating at least one intervertebral  
2 disc, said refurbisher comprising:  
3                   (a)    a ribbon-like energy application head having an energy application  
4                            region and a tissue protecting region; and  
5                   (b)    a control member operationally connected to said ribbon-like  
6                            energy application head, said control member suitable for  
7                            controlling said ribbon-like energy application head during  
8                            treatment of said at least one intervertebral disc.

1                   Claim 2 (currently amended): The refurbisher of claim 1, said energy  
2 application region having a surface that contacts a treatment area, [[wherein]] said  
3 ribbon-like energy application head [[is]] has an expandable and contractible layer  
4 opposite the treatment area surface of said energy application region.

1                   Claim 3 (currently amended): The refurbisher of claim 1 wherein said  
2 ribbon-like energy application head has at least one internal energy transmission layer.

1                   Claim 4 (currently amended): The refurbisher of claim 1 wherein said  
2 ribbon-like energy application head has at least one heat-generation layer-energy  
3 application layer containing heating elements.

1                   Claim 5 (currently amended): The refurbisher of claim 1 wherein said  
2 ribbon-like energy application head has at least one internal insulation layer.

1                   Claim 6 (currently amended): The refurbisher of claim 1 wherein said  
2 ribbon-like energy application head has at least one internal layer for deflecting the  
3 overlying dural sac and nerve roots to protect them from the effects of the thermal  
4 treatment.

1                   Claim 7 (currently amended): The refurbisher of claim 1 wherein said  
2 ribbon-like energy application head has at least one expandable and contractable  
3 internal layer.

1                   Claim 8 (currently amended): The refurbisher of claim 1, said ribbon-like  
2 energy application head further comprising:

- 3                   (a)    an internal bottom layer having a heat generator therein;  
4                   (b)    an internal middle layer providing thermal insulation; and  
5                   (c)    an internal top layer for deflecting the overlying dural sac and nerve  
6 roots to protect them from the effects of the thermal treatment.

1                   Claim 9 (original): An apparatus for treating at least one intervertebral  
2 disc, said apparatus comprising:

- 3                   (a)    an expandable and contractible energy application head having an  
4 energy application region and a tissue protecting region; and  
5                   (b)    said energy application head having a distance between said  
6 energy application region and said tissue protecting region wherein  
7 said distance is variable to protect tissue associated with said at  
8 least one intervertebral disc.

1                   Claim 10 (original): The apparatus of claim 9, said energy application  
2 head further comprising:

- 3                   (a)     smooth, rounded edges;
- 4                   (b)     a domed center section; and
- 5                   (c)     said edges sloped to said domed center section;
- 6                   (d)     wherein said energy application head has a wedge-shaped head  
7                   geometry.

1                   Claim 11 (original): The apparatus of claim 9, wherein said energy  
2 application head is a ribbon-like energy application head having an energy application  
3 region and a tissue protecting region.

1                   Claim 12 (original): The apparatus of claim 9, said energy application  
2 region is selected from the group consisting of:

- 3                   (a)     a flexible energy application region;
- 4                   (b)     a flat energy application region;
- 5                   (c)     an concave energy application region;
- 6                   (d)     a convex energy application region; and
- 7                   (e)     a malleable energy application region.

1                   Claim 13 (original): The apparatus of claim 9, said distance between said  
2 energy application region and said tissue protecting region being variable in proportion  
3 to the amount of energy being delivered to the intervertebral disc.

1                   Claim 14 (original): The apparatus of claim 9, said distance between said  
2 energy application region and said tissue protecting region being automatically variable.

1                   Claim 15 (original): The apparatus of claim 9, said distance between said  
2 energy application region and said tissue protecting region being manually variable.

3  
1           Claim 16 (original): The apparatus of claim 9, said distance between said  
2 energy application region and said tissue protecting region being variable by  
3 mechanically expanding and contracting said expandable and contractible energy  
4 application head.

5  
1           Claim 17 (original): The apparatus of claim 9 further including an  
2 inflatable portion for expanding and contracting said expandable and contractible  
3 energy application head.

4  
1           Claim 18 (original): An energy application device, said device comprising:

- 2           (a)    an energy application head having an energy application region  
3                   and a tissue protecting region;  
4           (b)    a distance between said energy application region and said tissue  
5                   protecting region;  
6           (c)    said energy application head having a contracted state in which  
7                   said distance is a minimum distance;  
8           (d)    said energy application head having an expanded state in which  
9                   said distance is a protecting distance greater than said minimum  
10                  distance; and  
11           (e)    means for varying said distance between said minimum distance  
12                  and said protecting distance.

13  
1           Claim 19 (original): The device of claim 18, said energy application head  
2 further comprising:

- 3           (a)    smooth, rounded edges;  
4           (b)    a domed center section; and  
5           (c)    said edges sloped to said domed center section;

6 (d) wherein said energy application head has a wedge-shaped head  
7 geometry.  
8

1 Claim 20 (original): The device of claim 18, wherein said energy  
2 application head is a ribbon-like energy application head having an energy application  
3 region and a tissue protecting region.  
4

1 Claim 21 (previously presented): A method for thermally treating an  
2 intervertebral disc while thermally protecting vulnerable tissues, said method comprising  
3 the steps of:

- 4 (a) gaining access to a vertebral column;  
5 (b) epidurally approaching the posterior aspect of said at least one  
6 intervertebral disc with a ribbon-like energy application head having  
7 an energy application region, a tissue protecting region, and a  
8 distance defined between said energy application region and said  
9 tissue protecting region;  
10 (c) varying said distance to protect tissue associated with said at least  
11 one intervertebral disc to maintain a safe temperature in vulnerable  
12 tissues near said at least one intervertebral disc; and  
13 (d) applying energy to a posterior aspect of said at least one  
14 intervertebral disc while maintaining a safe temperature in said  
15 vulnerable tissues near said at least one intervertebral disc.  
16

1 Claim 22 (original): The method of claim 21, further comprising at least  
2 one step selected from the group of steps consisting of:

- 3 (a) evaluating an extent of disc injury;  
4 (b) calculating an amount of energy needed to refurbish thermally said  
5 at least one intervertebral disc;

- 6 (c) monitoring an amount of energy delivered and a temperature in  
7 vulnerable tissues around said at least one intervertebral disc;  
8 (d) observing and evaluating an amount of shrinkage and  
9 strengthening of said at least one intervertebral disc to determine  
10 an intensity and duration of further energy delivery; and  
11 (e) verifying that said shrinkage and strengthening of said at least one  
12 intervertebral disc is mechanically successful.  
13

1 Claim 23 (previously presented): The refurbisher of claim 1 wherein said  
2 ribbon-like energy application head is an expandable and contractible energy  
3 application head, said an expandable and contractible energy application head further  
4 including an inflatable portion for expanding and contracting said expandable and  
5 contractible energy application head.  
6

1 Claim 24 (previously presented): The device of claim 18 further  
2 comprising an inflatable portion for expanding and contracting said energy application  
3 head between said expanded state and said contracted state.  
4

1 Claim 25 (previously presented): The method of claim 21, said step of  
2 varying said distance further comprising the steps of expanding an inflatable portion to  
3 increase said distance and contracting said inflatable portion contract to decrease said  
4 distance.  
5

1 Claim 26 (new): The refurbisher of claim 1, wherein said ribbon-like  
2 energy application head is elongated and relatively flat, said ribbon-like energy  
3 application head having a length, a width, and a height, said length being at least three  
4 times said width, said height being less than half said width.  
5

1                   Claim 27 (new): The apparatus of claim 9, wherein said energy  
2 application head is elongated and relatively flat, said energy application head having a  
3 length, a width, and a height, said length being at least three times said width, said  
4 height being less than half said width.

5  
1                   Claim 28 (new): The device of claim 18, wherein said energy application  
2 head is elongated and relatively flat, said energy application head having a length, a  
3 width, and a height, said length being at least three times said width, said height being  
4 less than half said width.

5  
1                   Claim 29 (new): The method of claim 21, further comprising the step of  
2 providing an elongated and relatively flat ribbon-like energy application head, said  
3 ribbon-like energy application head having a length, a width, and a height, said length  
4 being at least three times said width, said height being less than half said width.

5  
1                   Claim 30 (new): The apparatus of claim 9, said energy application head  
2 further comprising:  
3                   (a)    an internal top layer for deflecting the overlying dural sac and nerve  
4                            roots to protect them from the effects of the thermal treatment; and  
5                   (b)    an internal bottom layer having a heat generator therein.

6  
1                   Claim 31 (new): The device of claim 18, said energy application head  
2 further comprising:  
3                   (a)    an internal top layer for deflecting the overlying dural sac and nerve  
4                            roots to protect them from the effects of the thermal treatment; and  
5                   (b)    an internal bottom layer having a heat generator therein.

1                   Claim 32 (new): The method of claim 21, further comprising the step of  
2 providing an energy application head comprising:

- 3                   (a)    an internal top layer for deflecting the overlying dural sac and nerve  
4                            roots to protect them from the effects of the thermal treatment; and  
5                   (b)    an internal bottom layer having a heat generator therein.  
6

1                   Claim 33 (new): The apparatus of claim 9, wherein said energy  
2 application region has a surface that contacts a treatment area, said energy application  
3 head further comprising an expandable and contractible layer opposite the treatment  
4 area surface of said energy application region.  
5

1                   Claim 34 (new): The device of claim 18, wherein said energy application  
2 region has a surface that contacts a treatment area, said energy application head  
3 further comprising an expandable and contractible layer opposite the treatment area  
4 surface of said energy application region.  
5

1                   Claim 35 (new): The method of claim 21, further comprising the step of  
2 providing a ribbon-like energy application head having a surface that contacts a  
3 treatment area, and an expandable and contractible layer opposite the treatment area  
4 surface of said energy application region.  
5